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| Application Number   | 09/990,572           | RECE  | IIVED  |
| Filing Date          | November 23, 2001    | HEOL  |        |
| First Named Inventor | Osame Moselhi et al. | DEC ( | 2 2003 |
| Art Unit             | 3673                 |       |        |

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**Examiner Name** (unknown) 6446-17US JA/AD/mb Sheet of Attorney Docket Number

| U.S. PATENT DOCUMENTS |      |   |                  |                             |  |  |  |  |
|-----------------------|------|---|------------------|-----------------------------|--|--|--|--|
| Examiner              | Cite | Document Number                           | Publication Date | Name of Patentee or         | Pages, Columns, Lines Where<br>Relevant Passages or Relevant |  |  |  |
| initiais*             | No.1 | Number – Kind Code <sup>2</sup> (# known) | MM-DD-YYYY       | Applicant of Cited Document | Figures Appear   |  |  |  |
| SCC                   |      | US-6,175,380                              | Jan. 16, 2001    | Van Den Bosch               |  |  |  |  |
| SCC                   |      | US-5,870,314                              | Feb. 9, 1999     | Van Den Bosch               |  |  |  |  |
|                       |      | US-                                       |                  |                             |  |  |  |  |
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|           | FOREIGN PATENT DOCUMENTS |  |                  |                             |  |          |  |  |  |  |
|-----------|--------------------------|--|------------------|-----------------------------|--|----------|--|--|--|--|
| Examiner  | Cite                     | Cite Foreign Patent Document                   | Publication Date | Name of Patentee or         | Pages, Columns, Lines<br>Where Relevant Passages | $\Box$   |  |  |  |  |
| initials* | No.1                     | Country Code3 - Number4 - Kind Code5 (# known) | MM-DD-YYYY       | Applicant Of Cited Document | or Relevant Figures Appear                       | 7*       |  |  |  |  |
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| Signature | /Sheela Chawan/ | Considered | 06/21/2006 |  |

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|-----------------------------|------------------------|----------------------|----------------------|-----|-------|----|
| _                           |                        | Application Number   | 09/990,572           |     | L.,   | ,1 |
|                             | INFORMATION DISCLOSURE | Filing Date          | November 23, 2001    | REC | EIV   | 1  |
|                             | STATEMENT BY APPLICANT | First Named Inventor | Osama Moselhi et al. | 4 4 |       |    |
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**Examiner Name** (unknown) 6446-17US JA/AD/mb **Attorney Docket Number** 

|                      |              | NON PATENT LITERATURE DOCUMENTS   |         |  |  |  |  |  |  |
|----------------------|--------------|---|---------|--|--|--|--|--|--|
| xaminer<br>Initials* | Cite<br>No.1 | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published    |         |  |  |  |  |  |  |
| scc                  |              | Abraham D. Chae et al.,(2000) "Utilizing Neural Networks for Condition Assessment of Sanitary Sewer Infrastructure". Proceeding of the 17 <sup>th</sup> Int'l Conference on Robotics and Automation in Construction, Taipei. Taiwan, pp. 423-427.                 |         |  |  |  |  |  |  |
|                      |              | E.W. Duggan et al., (1995) Pratical Selection of Trenchless Technology "Methods for Sewerage and Drainage System Rehabilitation/Replacemen"t. Proceedings of the North American No-DIG'95, Chicago, III, SB2- pp.2-68.  | <u></u> |  |  |  |  |  |  |
|                      |              | Abraham D. Gokhale et al., (1998) Intelligent Systems Evaluation Technologies "An Analysis of Three Promising Options". Proceedings of the North American No DIG 98, New Mexico, pp. 254-256.   |         |  |  |  |  |  |  |
|                      |              | Abraham D. Gokhale et al., (2000) "Automated Assessment Technologies for Renewal of Underground Pipeline Infrastructure". Proceeding of the 17 <sup>th</sup> International Conference on Robotics and Automation in Construction, Taipei, Taiwan, pp. 433-438.    |         |  |  |  |  |  |  |
|                      |              | M. Kaseco et al., (1994) "Comparison of Traditional and Neural Classification for Pavement – Crack Detection". Journal of Transportation Engineering, ASCE, 120 (4), pp. 552-569.   |         |  |  |  |  |  |  |
|                      |              | Moselhi et al., (1993) "Project Selection Considering Risk". Construction Management and Economics, E & F.N. Spon, 11 (1), pp. 45-52.   | İ       |  |  |  |  |  |  |
|                      |              | Moselhi et al., (1999) "Automated Detection of Defects in Underground Sewer and Water Pipes". Journal of Automation in Construction, Elsevier Science, 8, pp. 581-588.  |         |  |  |  |  |  |  |
|                      |              | Moselhi et al., (1999) "An Al-Based System for Detection and Classification of Defects in Sewers".  Proceedings in INFRA 99 International Conference, Center of Expertise and Research on Infrastructures in Urban Areas (CERIU), Montreal, CANADA 3B: pp. 42-54. |         |  |  |  |  |  |  |
|                      |              | Moselhi et al., (2000) "Classification of Defects in Sewer Pipes Using Neural Networks". Journal of Infrastructure Systems, ASCE, 6(3) pp. 97-105.  |         |  |  |  |  |  |  |
| $\Psi$               |              | Moselhi et al., (2000) "An Automated System for Rehabilitation of Sewe Pipesr". Canadian Civil Engineer, CSCE, 17 (3), pp. 6-8.   |         |  |  |  |  |  |  |

| Examiner  | /Sheela Chawan/ | Date       |            |
|-----------|-----------------|------------|------------|
| Signature |                 | Considered | 06/21/2006 |
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| Substitute for form 1449PTO |                  |             |          | Complete if Known      |                      |     |     |              |
|-----------------------------|------------------|-------------|----------|------------------------|----------------------|-----|-----|--------------|
|                             |                  |             |          | Application Number     | 09/990,572           |     |     |              |
| INF                         | ORMATION         | N DISC      | CLOSURE  | Filing Date            | November 23, 2001    | REC | F۱۱ | VFL          |
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|                             |                  |             |          | Art Unit               | 3673                 | DEC | 02  | 2003         |
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| Sheet                       | 3                | of          | 3        | Attorney Docket Number | 6446-17US JA/AD/mb   |     | 16  | 3 <u>3</u> 8 |

|                     |              | NON PATENT LITERATURE DOCUMENTS .  |    |
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| caminer<br>nitials* | Cite<br>No.1 | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published | τ· |
| scc                 |              | Moselhi et al., (2001) "Multiple Classifiers for Automated Detection of Defects in Sewer Pipes".Proceeding of 2001 International Conference on Rehabilitation of Infrastructures, Waterloo, Canada, pp. 273-278.   |    |
|                     |              | Moselhi et al., (1998) " Rehab Select: A decision Support System for Selecting Trenchless Pipeline Rehabilitation Techniques". Proceedings of the North American No-DIG'98, New Mexico, pp. 14-23.   |    |
|                     |              | Frederick, Md. (1996) " NeuroShell-2 reference manual". Ward Systems Group Inc.  |    |
|                     |              | Ritchie S., (1989) "Digital Image Concepts and Application in Pavement Management". Journal of Transportation Engineering, ASCE, 116 (3), pp. 287-298.   |    |
|                     |              | Richie et al., (1991), "Development of an Intelligent System for Automated Pavement Evaluation".  Transportation Research Record, National Research Council, 1311, pp.112-119.   |    |
|                     |              | Frederick, Md. (1998) "Scion Image for Windows reference manual". Scion Corporation, Maryland, USA.  |    |
|                     |              | SINHA, S. (2001) "Development of an Automated Pipeline Inspection System", Proceeding of the International Symposium on Underground Infrastructure Research, Waterloo, Canada, pp. 279-286.  |    |
|                     |              | Shehab-Eldeen, T. et al., 2000, "A database System for Rehabilitation Techniques of Sewer Pipes". Proceedings of the 17th International Conference on Automation and Robotics in Construction., Taipel, Taiwan, pp. 1085-1090.                                 |    |
|                     |              | Shehab-Eldeen (2001) "A decision Support System for Rehabilitation of Sewer Pipes". Canadian<br>Journal of Civil Engineering, CSCE 28(3), pp. 394-401.   |    |
| V                   |              | Wirahadikusumah R., et al., (1998) "Assessment Technology for Sewer Rehabilitation". Journal of Automation in Construction, Elsevier Science, 7 (4), pp. 259-270.  |    |

| Examiner  |                 | Date       |            |
|-----------|-----------------|------------|------------|
| Signature | /Sheela Chawan/ | Considered | 06/21/2006 |

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